

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. - 20. (Canceled)

21. (New) A substrate processing apparatus that removes organic matter from a substrate with a removal liquid, comprising:

a process chamber configured for an organic matter removal process, said process chamber including light-blocking material;

a holding element to hold a substrate in said process chamber;

a removal liquid supply element to supply said removal liquid to said substrate held by said holding element;

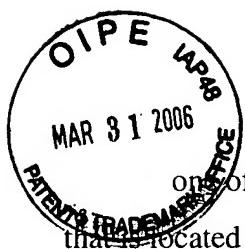
an indexer section including an indexer mechanism to directly load and unload said substrate with respect to a carrier set at a predetermined position;

a first light-blocking section, provided in an opening that is disposed in said process chamber and which allows for the passage of said substrate, for blocking light passing through said opening into said process chamber; and

a plurality of second light-blocking sections that are disposed in a plurality of locations along a transport path for said substrate that extends from said indexer section to said process chamber, respectively, and said light-blocking sections being respectively capable of blocking light passing through said transport path into said process chamber.

22. (New) The substrate processing apparatus according to claim 21, wherein said process chamber is housed in a process section to perform light blocking for an inside space of said process section,

a housing to perform light blocking for the inside of said housing is disposed between said indexer section and said process section,



one of said plurality of second light-blocking sections is provided in a first gate section that is located between said indexer section and said housing and allows for the passage of said substrate, and

another one of said plurality of second light-blocking sections is provided in a second gate section that is located between said housing and said process section and allows for the passage of said substrate.

23. (New) The substrate processing apparatus according to claim 22, wherein said housing is a relay section that includes a transfer mechanism to transfer said substrate between said indexer section and said process section.

24. (New) The substrate processing apparatus according to claim 21, wherein at least one of said plurality of second light-blocking sections includes a shutter that opens and closes a gate section to allow for the passage of said substrate, and a cover section, to cover an edge part of said shutter in its closed position, is being disposed in an edge part of said gate section.

25. (New) The substrate processing apparatus according to claim 21, wherein shutters included in said plurality of second light-blocking sections, respectively, are arranged parallel to each other, and a shutter included in said first light-blocking section and said shutters included in said plurality of second light-blocking sections, respectively, are orthogonally arranged.

26. (New) The substrate processing apparatus according to claim 21, wherein a clearance between said plurality of second light-blocking sections is greater than the size of said substrate in the direction of transport of said substrate.

27. (New) The substrate processing apparatus according to claim 21, wherein said carrier is a FOUP cassette allowing at least partially for the transmission of light.

28. (New) The substrate processing apparatus according to claim 22, wherein said process section comprises:

a first process chamber serving as said process chamber;

a second process chamber directed to a process different from said organic matter removal process; and

a substrate transport mechanism to transport said substrate between said first and second process chambers.

29. (New) The substrate processing apparatus according to claim 21, wherein shutters included in said plurality of second light-blocking sections, respectively, are so controlled that all of said shutters do not open concurrently.

30. (New) The substrate processing apparatus according to claim 21, wherein a viewing window for viewing the inside of said process chamber is provided on a wall of said process chamber.

31. (New) The substrate processing apparatus according to claim 30, wherein an illumination element is provided in the inside of said process chamber, and

wherein said illumination element is activated to produce illumination when said viewing window is opened, and said illumination element is deactivated when said viewing window is closed.

32. (New) The substrate processing apparatus according to claim 31, further comprising:

a window-open prohibiting element to prohibit the opening of said viewing window at least during a period of time that said substrate is processed with said removal liquid.

33. (New) The substrate processing apparatus according to claim 31, further comprising:

a removal-liquid-supply prohibiting element to prohibit the supply of said removal liquid from said removal liquid supply element at least during a period of time that said viewing window is opened.

34. (New) The substrate processing apparatus according to claim 21, wherein said organic matter to be removed from said substrate is a reaction product caused by the transformation of a resist film formed on said substrate.

35. (New) The substrate processing apparatus according to claim 34, wherein said reaction product is polymer that is formed by performing dry etching of a thin film present on the surface of said substrate with use of said resist film serving as a mask.

36. (New) A substrate processing apparatus that removes organic matter from a substrate with a removal liquid, comprising:

a process chamber configured for an organic matter removal process, said process chamber including of light-blocking material;

a holding element to hold a substrate in said process chamber;

a removal liquid supply element to supply said removal liquid to said substrate held by said holding element;

an indexer section including an indexer mechanism to directly load and unload said substrate with respect to a carrier set at a predetermined position;

a first shutter for opening and closing an opening that is formed in said process chamber, the first shutter allowing for the passage of said substrate, said first shutter including light-blocking material; and

a plurality of second shutters for opening and closing a plurality of gate sections that are formed in a transport path for said substrate that extends from said indexer section to said process chamber and arranged in a direction orthogonal to the direction of transport of said substrate, said second shutters being including light-blocking material.

37. (New) The substrate processing apparatus according to claim 36, wherein said process chamber is housed in a process section to perform light blocking of an inside of said process section,

wherein a housing to perform light blocking of the inside of said housing is disposed between said indexer section and said process section,

one of said plurality of second shutters is provided in one of said plurality of gate sections formed between said indexer section and said housing, and

another one of said plurality of second shutters is provided in another one of said plurality of gate sections formed between said housing and said process section.

38. (New) The substrate processing apparatus according to claim 37, wherein said housing is a relay section that includes a transfer mechanism to transfer said substrate between said indexer section and said process section.

39. (New) The substrate processing apparatus according to claim 36, wherein a cover section to cover an edge part of at least one of said plurality of second shutters in its closed position is disposed in an edge part of at least one of said plurality of gate sections.

40. (New) The substrate processing apparatus according to claim 36, wherein said first shutter and said plurality of second shutters are orthogonally arranged.